

**Please provide the following details on the origin of this report.**

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***Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report.***

Taxonomy is mainly developed on Universities and Research Institutions,

This report has been prepared by the National Commission for the Knowledge and Use of Biodiversity- Mexico (CONABIO), as the National Focal Point of the Global Taxonomy Initiative (GTI). CONABIO is a Mexican governmental agency which main purpose is to coordinate, support and promote the knowledge and use of biological diversity in Mexico. CONABIO's priorities are related to GTI in overcome the taxonomic impediment.

Conabio has continue developing the National Biodiversity Information System (SNIB), which lays on a data bank that compiles specimen records from Mexican and foreign collections (more than 4,000,000 specimen records) and a key component, the taxonomic authority files (with ca. 70,000 names accessible on data bases), and also information of species in concern, wild relatives, invasive species, etc.

Monitoring activities have started from a global perspective, but Mexico has not consider the use of indicators as proposed in this report by GTI.

**REPORT ON IMPLEMENTATION OF PROGRAMME OF WORK FOR THE  
GLOBAL TAXONOMY INITIATIVE**

**Programme of Work for the Global Taxonomy Initiative  
Annex to Decision VI/8**

**Operational Objective 1. Assess taxonomic needs and capacities at national, regional and global levels for the implementation of the Convention**

1. Has your country undertaken any taxonomic needs assessments and identified priorities in this regard?	
a) no (please specify the reasons)	
b) no, but assessment is under way	
c) yes, some needs assessments made (please provide details)	
d) yes, comprehensive assessments made (please provide details)	X
Further comments on country-based taxonomic needs assessments and identification of priorities	
<p>Information of 193 scientific collection hold in 69 institutions was compiled from 1996 to 1998. The information was gathered applying a detail questionnaire to the main institutions related to taxonomic and systematic activities.</p> <p>Main problems faced by collections, as insufficiency of human and material resources were detected. The lack of specialist in a megadiverse country as Mexico was evident.</p> <p>Many research, educational and conservation activities rely on these information centres, which provide, create and maintain essential biodiversity information. We concluded that this unprecedented effort, must be updated.</p> <p>The information was an efficient tool to plan strategic actions to improve capacities at national and regional level.</p> <p>Database and synthesis published: Llorente, J. Koleff, P., Benítez, H., &amp; Lara, L. 1999. Inventario y Diagnóstico de la actividad taxonómica en México, CONABIO. México.</p> <p>Also available on line <a href="http://www.conabio.gob.mx/informacion/acttax/doctos/colecciones_cientificas.html">http://www.conabio.gob.mx/informacion/acttax/doctos/colecciones_cientificas.html</a></p> <p>CONABIO is planning to update this Assessment by 2005, with a more wide perspective considering all institutions related with the study of biodiversity.</p>	
2. Has your country worked with other countries in the region to undertake regional taxonomic needs assessments and identify priorities in this regard?	
a) no (please specify the reasons)	
b) no, but some collaborative projects are being considered or planned	
c) yes, some activities undertaken (please provide details)	X
d) yes, many activities undertaken (please provide details)	
Further comments on regional taxonomic needs assessment and identification of priorities	
3. Is your country involved in any activities as part of a global taxonomic needs assessment?	

a) no	
b) yes (please provide details)	X
Further comments on the involvement in the activities for the global taxonomic needs assessment	
<p><b>GBIF - Global Biodiversity Information Facility</b> Mexico is member of GBIF's Governing Board.</p> <p><b>ITIS -North America - Integrated Taxonomic Information System</b> <a href="http://www.conabio.gob.mx/informacion/catalogo_autoridades/doctos/siit.html">http://www.conabio.gob.mx/informacion/catalogo_autoridades/doctos/siit.html</a> Authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world. Partnership of U.S. and Canadian; other organizations; and taxonomic specialists. ITIS is also a partner of Species 2000 and the Global Biodiversity Information Facility (GBIF). Authority files of Mexican species of Termites, Amphibians and Reptiles are already integrated. In process: Cactaceae, Asteraceae, Mammals, Birds, Hymenoptera, Helminthes,</p> <p><b>REMIB - THE WORLD INFORMATION NETWORK ON BIODIVERSITY</b> <a href="http://www.conabio.gob.mx/remib/doctos/remib_esp.html">http://www.conabio.gob.mx/remib/doctos/remib_esp.html</a> At present, REMIB gathers information of the main taxonomic groups of plants (vascular plants and germoplasm, algae, fungi and lichens, mosses and liverworts) vertebrates and invertebrates, both terrestrial and aquatic, and bacteria. The network contains specimens from more of 200 countries and it is represented by a total of 6 422 648 specimens of which 5 028 908 have localities and 4 431 999 have sites (lat-long). Recently it was incorporated the databases pertaining to the National School of Biological Sciences, IPN and to the Biology, Technology and Prototypes Unit (UBIPRO) of the Research and Graduate Division of the Faculty of Superior Studies - Iztacala, UNAM, the Herbarium of Geo. B. Hinton and the node corresponding to the National Collection of Microbial and Cellular Cultures of the CINVESTAV-IPN.</p> <p><b>Megadiverse Countries Workshop on the All Species Inventory (Mexico, September, 2001)</b> Workshop focused on the identification and management of information and taxonomic capacity needs in Megadiverse Countries. The All Species project was also presented, which focuses on seven main areas: collections and filed work/inventories, cabinet work/taxonomy and systematics, capacity-building and training of human resources, museums/institutional strengthening, networking development of methodologies and bio-informatics.</p>	

4. Is your country undertaking any activities of public education and awareness to promote the implementation of the programme of work for the GTI?	
a) no	X
b) yes, some programmes developed and some activities undertaken (please provide details)	
c) yes, comprehensive programmes developed and many activities undertaken (please provide details)	
Further comments on public education and awareness programmes and activities	
Not specifically, but Universities, Herbaria, Museums and research Centres carry out activities on education and CONABIO is supporting research projects regarding data basing fieldwork inventories, elaboration of authority files, etc.	

**Operational objective 2. Provide focus to help build and maintain the systems and infrastructure needed to obtain, collate and curate the biological specimens that are the basis for taxonomic knowledge**

5. Is your country working to strengthen global and regional capacity building to support access to and generation of taxonomic information <sup>1</sup> ?	
a) no (please specify the reasons)	
b) no, but some programmes under development	
c) yes, limited capacity building (please provide details)	X
d) yes, significant capacity building (please provide details)	
Further comments on global and regional capacity building to support access to and generation of taxonomic information	
<p>Conabio invests about 300,000 USD per year in supporting research projects to develop databases</p> <p>More resources are needed specially to support material needed to keep curated scientific collections. Results of the Inventory and diagnosis analysis of taxonomic activity in Mexico, Conabio provided support to National collections infrastructure from 1994 to 1998 (total 70,000 USD to ca. 60 scientific collections).</p> <p>Training Course on BIOTICA- The Biótica information (Biótica<sup>®</sup>) System has been especially designed by CONABIO to handle curatorial, nomenclatural, geographical, bibliographical and ecological data. Its purpose is to assist, reliably and simply, in the capture and updating of the data.</p>	
6. Is your country working with other countries to create and/or strengthen the networks for regional cooperation in taxonomy?	
a) no	
b) no, but consultation is under way	
c) no, but some plans and programmes are under development	
d) yes, some activities undertaken for this purpose (please provide details)	
e) yes, comprehensive activities undertaken for this purpose (please provide details)	X

<sup>1</sup> Responses to question 5 are expected to focus on, but not limited to (a) human capacity building; (b) infrastructure capacity building.

Further comments on strengthening of existing networks for regional cooperation in taxonomy

**GBIF - Global Biodiversity Information Facility**

Conabio has made database available about 3.5 million specimen records.

**REMIB - THE WORLD INFORMATION NETWORK ON BIODIVERSITY**

[http://www.conabio.gob.mx/remib/doctos/remib\\_esp.html](http://www.conabio.gob.mx/remib/doctos/remib_esp.html)

**ITIS-North America - INTEGRATED TAXONOMY INFORMATION SYSTEM**

<http://www.itis.usda.gov/>

[http://www.cbif.gc.ca/pls/itisca/taxaget?p\\_ifx=plglt](http://www.cbif.gc.ca/pls/itisca/taxaget?p_ifx=plglt)

*Operational objective 3. Facilitate an improved and effective infrastructure/system for access to taxonomic information, with priority on ensuring that countries of origin gain access to information concerning elements of their biodiversity*

7. Is your country involved in the development of a coordinated global taxonomy information system, in particular the infrastructure to access digitized data/information?

a) no	
b) no, but some plans are being considered	
c) yes, to a limited extent (please provide details)	
d) yes, to a significant extent (please provide details)	X

Further comments on involvement in the development of a coordinated global taxonomy information system

Mexico, through CONABIO, has used three strategies to repatriate data. In the first one, Conabio has supported Mexican taxonomists visiting foreign collections to review specimens and to capture data in the labels. 1,250,000 specimen records from 136 such projects have been incorporated to the National Biodiversity Information System (SNIB). In the second one, Conabio has established agreements with foreign institutions to share data of Mexican specimens (Table 2). Conabio prefers to make the data available through web portals like REMIB (ca. 250,000 specimen records): [http://www.conabio.gob.mx/remib/doctos/remib\\_esp.html](http://www.conabio.gob.mx/remib/doctos/remib_esp.html), rather than simply obtaining copies of databases. As part of the agreements Conabio geo-references those records lacking geographical coordinates data, when feasible. Geo-referenced data is send back to the database owners' institution. The third method consists in obtain high quality digital images of specimens at sections of herbaria that the taxonomists regard as well curated and taxonomically stable. Files are send via FTP to Conabio, where there are teams capturing data in Biotica\* and geo-referencing them. We had obtained ca 80,000 digital images of specimens from the Herbaria at Royal Botanical Gradens Kew, New York Botanical Garden, University of Arizona, and Texas University . Databases data are made web available through the collection nodes of the World Biodiversity Information Network (REMIB).

\*BIOTICA- The Biótica information (Biótica<sup>®</sup>) System has been especially designed by CONABIO to handle curatorial, nomenclatural, geographical, bibliographical and ecological data. Its purpose is to assist, reliably and simply, in the capture and updating of the data.

**Operational objective 4. Within the major thematic work programmes of the Convention include key taxonomic objectives to generate information needed for decision-making in conservation and sustainable use of biological diversity and its components**

8. Has your country made any taxonomic studies and inventories at the national level, which provide a basic assessment of forest biological diversity, in particular in areas under current threat for habitat conversion, or of high conservation value?	
a) no (please provide the reasons)	
b) no, but some programmes are under development	
c) yes, some studies and inventories made (please provide details)	X
d) yes, comprehensive studies and inventories made (please provide details)	
Further comments on taxonomic studies and inventories made for a basic assessment of forest biological diversity	
In general, including forests, but not particularly for areas under current threat for habitat conversion, or of high conservation value. Inventories of many forest regions in Mexico are regularly published for several taxonomic groups, many of them funded by CONABIO.	
9. Has your country undertaken any taxonomy-related activities relating to marine and coastal biodiversity, in particular taxonomic work related to identification of ballast water organisms and monitoring health of mangrove systems through their invertebrate fauna?	
a) no	
b) not applicable	
c) no, but some programmes are under development	

d) yes, some activities undertaken (please provide details)	X
e) yes, many measures undertaken (please provide details)	
Further comments on taxonomy-related activities identified in the programme of work on marine and coastal biodiversity	
General, including ballast water organisms, but not particularly for monitoring health of mangrove systems through their invertebrate fauna.	
There are research institutions in Mexico dedicated activities related to marine and coastal biodiversity, such as: Instituto de Ciencias del Mar y Limnología, UNAM; Centro Interdisciplinario de Ciencias Marinas CICIMAR ; Centro e Investigaciones Biológicas del noreste CIBNOR.)	
10. Has your country developed taxonomic support for implementing relevant actions identified in the programme of work on dry and sub-humid lands biodiversity, in particular identification of key indicator taxa like lichens?	
a) no (please provide reasons and plans for improvement)	
b) not applicable	
c) no, but some programmes are under development	
d) yes, some activities undertaken (please provide details)	X
e) yes, many activities undertaken (please provide details)	
Further comments on taxonomic support for implementing the programme of work on dry and sub-humid lands biodiversity	
As indicated on question 8 related to forests, general, including dry and sub-humid environments, but not in particular for identification of key indicator taxa like lichens.	
11. Has your country developed taxonomic support for implementing relevant actions identified in the programme of work on inland waters biodiversity, in particular regional guides to freshwater fish and invertebrates as an input to ecosystem monitoring for river and lake health?	
a) no	
b) no, but some programmes are under development	
c) yes, some activities undertaken (please provide details)	X
d) yes, many activities undertaken (please provide details)	
Further comments on taxonomic support for the implementation of the programme of work on inland waters biodiversity	
Some activities, at least two groups in Mexico dedicated to monitoring	
12. Has your country undertaken any taxonomy-related activities identified in the programme of work on agricultural biodiversity as well as relevant activities identified in the International Pollinator Initiative and the International Soil Biodiversity Initiative?	
a) no	
b) no, but some activities are being planned	
c) yes, some activities undertaken (please provide details)	X
d) yes, comprehensive activities undertaken (please provide details)	
Further comments on taxonomy-related activities for the implementation of the programme of work on agricultural biodiversity	

Yes about Agrobiodiversity. There are several institutions working on different related issues	
13. Is your country developing any taxonomic support for the implementation of the programme of work on mountain biodiversity, in particular identification of biodiversity components unique to mountain ecosystems?	
a) no	
b) no, but some programmes are under development	
c) yes, limited support (please provide details)	X
d) yes, significant support (please provide details)	
Further comments on taxonomic support for the implementation of the programme of work on mountain biodiversity	
The National Commission for Forests (CONAFOR) recently launched the Program for "Priority Mountains" in Mexico.	
14. Has your country developed taxonomic support for the implementation of the programme of work on protected areas?	
a) no	
b) no, but some programmes are under development	
c) yes, some programmes in place and are being implemented (please provide details)	X
d) yes, comprehensive programmes are being implemented (please provide details)	
Further comments on taxonomic support provided to the implementation of the programme of work on protected areas	
Inventories on protected areas.	

**Operational objective 5. Within the work on cross-cutting issues of the Convention include key taxonomic objectives to generate information needed for decision-making in conservation and sustainable use of biological diversity and its components**

15. Has your country taken any measures to strengthen capacity for the inventory and classification of biodiversity and its components in the development of a national strategy on access and benefit-sharing?	
a) no	
b) no, but some programmes are under development	X
c) yes, some measures taken (please provide details)	
d) yes, comprehensive measures taken (please provide details)	
Further comments on the measures to strengthen capacity for the inventory and classification of biodiversity and its components in the development of a national strategy on access and benefit-sharing	
Even though we have not yet developed a National Strategy for access to genetic resources and benefit-sharing, we do have the a wide range of inventories and classification of Biodiversity through the National System for Biodiversity Information (SNIB). This System has 11 years of development and has 3.5 million specimen records, which will certainly be one of the main elements to regulate ABS issues.	

16.Has your country developed taxonomic support to address the issues of invasive alien species?	
a) no	
b) no, but relevant policy and programme under development	
c) yes, some policies and programmes in place (please provide details)	X
d) yes, comprehensive policies and programmes in place (please provide details)	
Further comments on taxonomic support to address the issues of invasive alien species	
Support workshops to get a directory of experts and lists of plants and vertebrates (already available on Internet <a href="http://www.conabio.gob.mx/conocimiento/info_especies/especies_invasoras/doctos/especiesinvasoras.html">http://www.conabio.gob.mx/conocimiento/info_especies/especies_invasoras/doctos/especiesinvasoras.html</a>	
Supporting projects developed by experts: - Vibrans, L.H. 2000. <a href="#">Plantas exóticas del centro de México y obtención de imágenes para una flora virtual de malezas</a> . Colegio de Postgraduados en Ciencias Agrícolas, Campus Estado de México. Base de datos SNIB-Conabio proyecto U019. México. (a new project that will made available images of weeds from Internet is being developed by Dr. Heike Vibrans) - Medellín, R.A. 2000. <a href="#">Vertebrados superiores exóticos en México: diversidad, distribución y efectos potenciales</a> . Departamento de Ecología Funcional y Aplicada, UNAM. Base de datos SNIB-Conabio proyecto U020. México. - Espinosa, F.J. 2000. <a href="#">Malezas introducidas en México</a> . Instituto de Ecología, UNAM. Base de datos SNIB-Conabio proyecto U024. México.	

17.Has your country developed taxonomic information system to support the maintenance, preservation and protection of traditional knowledge, innovations and practices of indigenous and local communities in accordance with Article 8(j) and related provisions?	
a) no	
b) not applicable	
c) no, but some programmes are under development	
d) yes, some activities undertaken but a system is not in place yet (please provide details)	X
e) yes, a taxonomic information system in place (please provide details)	
Further comments on the taxonomic information system to support the maintenance, preservation and protection of traditional knowledge, innovations and practices of indigenous and local communities	
18.Has your country undertaken any taxonomy-related activities that support the implementation of the ecosystem approach and the work in the field of assessments, monitoring and indicators?	
a) no	
b) no, but some programmes are under development	
c) yes, some programmes in place (please provide details)	X

d) yes, comprehensive programmes in place (please provide details)

Further comments on programmes and activities to support the implementation of the ecosystem approach and the work in the field of assessments, monitoring and indicators

Based on the SNIB, CONABIO provides thorough information to various stakeholders to assess decision making processes regarding the conservation and sustainable use of biodiversity. This answers particularly to Principle 11 of the Ecosystem Approach.

On the other hand, a monitoring bird program (AverAves or eBird) will be available shortly through Conabio's web page. It is expected and exponential growth on birds data.

***If your country wishes to provide additional information on implementation of this programme of work, please do so in the following space***

Taxonomy is science to describe new taxa, classify and understand relationships. Therefore, taxonomic activities have been carried out traditionally in many Academic institutions, Research Centres, Herbaria and Museums, before the Conference of the parties. There were about 172 scientific collections with 10,000,000 specimens by 1995, and they have continue growing. Thus, for example, the National Herbarium at the National University of Mexico (IB-UNAM), which is the Mexican institution with largest installed capacity to develop taxonomic and systematic research, grows at a rate of 60,000 specimens per year.

After the signature of the Parties, there has been a notable development in made data available, even to the own institutions, by developing informatics infrastructure and databases.

One of the key databases supported and developed by CONABIO are the Taxonomic Authority files, which are lists that contain the accepted/valid names of all taxa included in a determined group following a specific system of classification. The purpose of having these catalogs is to use them as a standard and quality control for all the data that are continually added to our data bank on biodiversity. Also, they provide a nomenclatural system that easily recovers the specimens' information. These catalogs are made available through our web site: [http://www.conabio.gob.mx/informacion/catalogo\\_autoridades/doctos/acerca.html](http://www.conabio.gob.mx/informacion/catalogo_autoridades/doctos/acerca.html) (ca. 70,000 names) and eventually through ITIS-North America, from which CONABIO is the Mexican partnership agency. The Biology Institute at UNAM has describe, in average, in the last 10 years 100 species per year.

CONABIO has strengthened the National Biodiversity Information System by repatriating data of Mexican specimen held at foreign institutions.

To made available all information of scientific collections, of what Conabio has called taxonomic and biogeographical databases, it was created infrastructure to link distributed specimen data: THE WORLD INFORMATION NETWORK ON BIODIVERSITY (REMIB). REMIB is functioning since July 1999 and actually provide access to ca. 7,000,000 specimens records from 104 scientific collections from six countries, although data is from ca., 2000 countries.

**GENERAL COMMENT ON THE GTI REPORT FORMAT:**

There has been considerable progress and work in Mexico regarding taxonomic needs and biodiversity information. However, this work is not carried out by criteria such as monitoring health of mangrove systems through their invertebrate fauna, identification of key indicator taxa like lichens or regional guides to freshwater fish and invertebrates as an input to ecosystem monitoring for river and lake health. Thus, Mexico would like to highlight that the way in which the questions in this report are written is not practical, particularly questions 8-14.

Even though it may be possible to cross cut taxonomic activities and work developed in

Mexico with CBD's thematic programs of work, it is unrealistic to measure progress under very specific criteria such as the indices proposed in this report.

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